A High Pressure Diffusion Chamber in a Pulsed Magnetic Field

for work with light gases such as hydrogen, deuterium and helium at pressures up to 25 atm. The magnetic field in the sensitive region, which is produced by the selenoid magnet, MS-4, reaches up to 11 200 oersted, in continuous operation and 16 000 oersted in pulsed operation. The MS-4 magnet is illustrated in Fig.2, in which 1 is the photographic camera, 2 is the chamber, 3 are illuminators and 4 is the coil of the selenoid. There are 2 coils which consist of sectionalised windings of copper tubes. The gap between the coils in the magnet may be varied between 50 and 100 mm. The windings are cooled by distilled water under pressure of 5 atm. A sectional drawing of the diffusion chamber itself is given in Fig.4. The body of the chamber, 1 , is of stainless steel, and is made from a single piece. Tubes are attached to the lower part of the body at 2 , in which acetone is circulating and thus cools the body. A reservoir, 4 , is included and collects condensed methyl alcohol, which is the working liquid. At the bottom of the chamber there is a copper disc, 5 , which is used to equalise the temperature. The surface of the disc is electrolytically blackened. A plexiglass cylinder 7 is set up on this disc and, as was mentioned above, this cylinder produces the necessary

A High Pressure Diffusion Chamber in a Pulsed Magnetic Field

temperature gradient. Experiments have shown that glass containing potassium salts gives a strong electron background. Estimates carried out for various kinds of glasses have shown that the main source of the background tracks is K^{40}. The magnetic field strongly localises the tracks of background electrons in the central part of the chamber. However, near the walls there is a non-sensitive zone 2-3 cm wide. The authors thank the following persons for help in the design and the construction of the installation: V.M.Soroko, K.A.Baycher, I.A.Shtyrin and P.T.Pavlov. Acknowledgments are also made to A.G.Potekhin and G.P.Zorin. There are 9 figures and 12 references, of which 7 are English and the rest are Soviet.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy
(Joint Institute for Nuclear Studies)

SUBMITTED: December 9, 1957.

KOZODAYEV, M.S.; KLYUKIN, M.M.; SULYAYEV, R.M.; FILIPPOV, A.I.; SHCHERBAKOV, Yu.A.

Inelastic interaction of $K^{\pm}$-mesons with helium nuclei at an energy of about 300 Mev. Zhur.eksp.i teor.fiz. 38 no.2:409-422 F '60. (MIRA 14:5)

1. Ob"yedinennyy institut yadernykh issledovaniy.
(Mesons) (Helium)

82409

S/056/60/038/03/07/033
B006/B014

24.6600

AUTHORS: Kozodayev, M. S., Kulyukin, M. M., Sulyayev, R. M., Filippov, A. I., Shcherbakov, Yu. A.

TITLE: Interaction of Protons With He^4 Nuclei at an Energy of 630 Mev

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 38, No. 3, pp. 708-715

TEXT: In the present paper the authors report on their investigations of the scattering of 630-Mev protons on helium nuclei. These investigations were conducted with a high-pressure diffusion cloud chamber. This method made it possible to investigate elastic and inelastic scattering in one and the same experiment. Fig. 1 provides a scheme of the experimental setup. The experimental area was 30 cm in diameter, and the height of the sensitive layer was 5 - 7 cm. The chamber was filled with helium up to 15 - 20 atm. The proton energy was a little lower than the maximum energy supplied by the synchrocyclotron, and amounted to (630±15)Mev. A picture was taken every 15 - 20 sec, and a total of 20,000 stereophotographs was thus obtained. Interaction events were isolated by interpreting the pictures three times with a stereomagnifier;

Card 1/4

82405

Interaction of Protons With He^4 Nuclei at an Energy of 630 Mev

S/056/60/038/03/07/033
B006/B014

a total of 444 scatterings of protons on helium nuclei was found. For the most part, interactions were found in two- and three-pronged stars, while only 8 and 4 interactions were found in four- and five-pronged stars, respectively. The total cross section was found to be $(150 \pm 13).10^{-27}$ cm^2. Table 1 contains the reactions that may take place in the scattering of 630-Mev protons on helium nuclei. They are compiled in four groups and are discussed individually. Fig. 2 shows a picture of a pion pair production. Fig. 3 depicts the angular distribution of elastically scattered protons; $d\sigma/d\Omega$ decreases rapidly with increasing angle. The smallest angle used was 5° in the center-of-gravity system. The elastic cross section was found to be $(22.0 \pm 4.5).10^{-27}$ cm^2 without correcting for small angles, and $(24.0 \pm 5.0).10^{-27}$ cm^2 with a correction. The cross section in the range of from 315 to 630 Mev hardly depended on energy. The angular distribution of elastically scattered protons was also computed within the optical model in Born approximation without considering the spin-orbit- and Coulomb interactions, both for 630 and 315 Mev; the distribution curves obtained are likewise drawn in the diagram (Fig. 3). Inelastic collisions are divided into two groups and separately

Card 2/4

Interaction of Protons With He^4 Nuclei at an Energy of 630 Mev

S/056/60/038/03/07/033
B006/B014

discussed on this basis: multiple collisions in the helium nucleus and quasi-free scattering.

$N_{pn}^{nucl} = N_{pn} + N_{pn}^{k} = N_2' + N_4 + N_5 + N_{pn}^{k}$ is written down (N_{pn}^{nucl} being the total number of collisions of the impinging proton with the neutrons of the nucleus, N_{pn} the number of quasi-free interactions, N_2' the number of the two-pronged stars (without elastic scattering), N_4 and N_5 the number of four and five-pronged stars, N_{pn}^{k} the number of cases of a multiple interaction. The reactions of the various stars are discussed. The contribution of multiple interaction processes is written down as being $\varepsilon = 0.22 \pm 0.07$. Cross sections are compiled in Table 2 and details are discussed for the possible reactions in the case of quasi-free scattering. A section of $(15 \pm 2).10^{-27}$ cm^2 was found for the quasi-elastic p-p scattering, and $(24 \pm 2).10^{-27}$ cm^2 per nucleon for the quasi-free p-n interaction. The total inelastic scattering cross section is found to be $(126 \pm 14).10^{-27}$ cm^2, the cross section for events involving π^--meson production in p-n collisions was found to be $(1.3 \pm 0.5).10^{-27}$ cm^2 per neutron. Fig. 4 shows the angular distribution of the quasi-elastic p-p

Card 3/4

Interaction of Protons With He^4 Nuclei at an Energy of 630 Mev

S/056/60/038/03/07/033
B006/B014

scattering. The authors finally thank A. G. Potekhina, V. F. Poyenko, and Ye. A. Shvanev for their assistance. There are 4 figures, 2 tables, and 17 references, 7 of which are Soviet.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: September 10, 1959

Card 4/4

84387

S/056/60/039/004/005/048
B004/B070

24.6900

AUTHORS: Kozodayev, M. S., Kulyukin, M. M., Sulyayev, R. M., Filippov, A. I., Shcherbakov, Yu. A.

TITLE: Angular and Momentum Distributions of Residual Nuclei in Inelastic Scattering of Fast π-Mesons and Protons From Helium

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 4(10), pp. 929-936

TEXT: The authors studied the angular and momentum distributions of the residual nuclei in quasifree interaction of fast pions and protons with helium nuclei. A high pressure diffusion chamber was employed and was irradiated by particle beams of the synchrocyclotron of their institute. The energy of the protons was (630±15)Mev, that of the π^+-meson (237±7)Mev, and that of the π^--meson (330±6)Mev. 20,000 photographs were taken of proton and π^--meson beams, and 10,000 of the beams of π^+-mesons. The details of the experiment, evaluation of the plates, and the

Card 1/3

Angular and Momentum Distributions of Residual Nuclei in Inelastic Scattering of Fast π-Mesons and Protons From Helium

S/056/60/039/004/005/048
B004/B070

identification of events are described already in Refs. 8 and 9. Fig. 1 shows a typical quasielastic proton - proton scattering event. The observed reactions and their cross sections are given in Table 1. Fig. 2 shows the angular distribution of the residual nuclei in quasifree p - p scattering; Fig. 3 shows the angular distribution for the interaction of π^+- and π^--mesons. The residual nuclei were predominantly emitted forward. The anisotropy of the angular distribution is characterized by $\alpha = N_1/N_2$ (N_1 = number of nuclei emitted in the forward direction, N_2 = number of nuclei emitted backward). The values obtained are: $\alpha_p = 2.17 \pm 0.15$, $\alpha_\pi = 1.26 \pm 0.13$. The momentum distributions of the residual nuclei are shown in Fig. 4 (protons) and Fig. 5 (pions). The observed results are interpreted by the authors on the basis of the Serber - Goldberger model. When the additional momentum $\Delta\vec{p}$ imparted to the residual nucleus by the knocked-out nucleon is taken into account, a good agreement between the experimental and the calculated data is obtained (Fig. 6). The angular distribution for the reaction (1):

84367

Angular and Momentum Distribution of Residual Nuclei in Inelastic Scattering of Fast π-Mesons and Protons From Helium

S/056/60/039/004/005/048
B004/B070

$p + He^4 \rightarrow p + p + H^3$ was calculated by means of a "Ural" computer. Figs. 7 and 8 show the momentum spectra of H^3 nuclei where account has been taken of the interaction between the nucleon and the residual nucleus. The momentum p_o for pions as well as protons was found to be 150 Mev/c which corresponds to the energy value 12±2 Mev. The momentum distribution may be described by a Gaussian function; the value of the momentum becomes 1/e of the maximum at 12±2 Mev. The authors mention a paper of M. G. Meshcheryakov et al. (Ref. 4). They thank I. K. Vzorov and Yu. D. Prokoshkin for discussions, I. A. Popova for calculations with the computer, and Ye. A. Shvaneva for help in the evaluation of experimental data. There are 8 figures, 1 table, and 17 references: 3 Soviet, 12 US, 1 British, and 1 German.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: May 11, 1960

Card 3/3

VVEDENSKIY, B.A., glav. red.; VUL, B.M., glav. red.; SHTEYNMAN, R.Ya., zam. glav. red.; BALDIN, A.M., red.; VONSOVSKIY, S.V., red.; GALANIN, M.D., red.; ZERNOV, D.V., red.; ISHLINSKIY, A.Yu., red.; KAPITSA, P.L., red.; KAPTSOV, N.A., red.; KOZODAYEV, M.S., red.; LEVICH, V.G., red.; LOYTSYANSKIY, L.G., red.; LUK'YANOV, S.Yu., red.; MALYSHEV, V.I., red.; MIGULIN, V.V., red.; REBINDER, P.A., red.; SYRKIN, Ya.K., red.; TARG, S.M., red.; TYABLIKOV, S.V., red.; FEYNBERG, Ye.L., red.; KHAYKIN, S.E., red.; SHUBNIKOV, A.V., red.

[Encyclopedic physics dictionary] Fizicheskii entsiklopedicheskii slovar'. Moskva, Sovetskaia Entsiklopediia. Vol.4. 1965. 592 p. (MIRA 18:1)

KOZODAYEV, P.A., inzh.

Substituting cylindrical condensers for lense condensers. Khim. Mashinostr. no.1:38 Ja'63 (MIRA 17:7)

KOZODAYEVA, G.P.

Statistical method of quality control and its difference from the total quality control. Trudy Stud. nauch. ob-va LIEI no.3: 68-75 '59. (MIRA 16:10)

L 47104-66 EWT(m)

ACC NR: AR6016490 SOURCE CODE: UR/0272/65/000/012/0106/0106

AUTHOR: Golovanov, N. A.; Kozodayeva, N. M.; Korotin, B. A.; Popkov, G. K.

47 B

19

TITLE: Measuring the dose rate of neutron radiation of the wide energy spectrum

SOURCE: Ref. zh. Metrologiya i izmeritel'naya tekhnika, Abs. 12.32.919

REF SOURCE: Tr. Soyuzn. n.-i. in-ta priborostr., vyp. 1, 1964, 36-43

TOPIC TAGS: radiation, neutron radiation, radiation dose rate, dosimeter, neutron detector

ABSTRACT: The difficulties were evaluated of designing an ideal dosimeter to measure the dose rate of neutron radiation over a wide energy range. Two methods were examined for designing a data transmitter with dosimetric characteristics in the energy range ranging from 0.025 ev to 20 Mev. The first method is based on the use of an inhibitor of a given width to insure the dosimetric character of the sensitivity curve and the thermal neutron detector. Transmitters,

Card 1/2 UDC: 389:539.16.07:539.125

L 47104-66
ACC NR: AR6016490

designed on this principle, are normally called "isodosic." The second method is based on the use of the characteristics of neutron scintillation detectors; the curves representing the dependencies between sensitivity and energy provide a satisfactory approximation of the dosimetric curve at a given ratio of the detector sensitivity to fast and intermediate neutrons. The main shortcomings of these methods are pointed out. The operational principle of a dosimetric combination neutron detector, with only a few shortcomings, intrinsic to an "isodosic" transmitter and a dispersion detector is briefly described. A method for applying separate transmitters with a common dosimetric scale, based on a method of dispersion scintillation detectors was suggested. The advantages of various transmitters over "isodosic", dispersion, and combination transmitters are discussed. [Translation of abstract] [FM]

SUB CODE: 18/

hs

Card 2/2

L 32068-66 EWT(m)

ACC NR: AR6016160 SOURCE CODE: UR/0058/65/000/011/A050/A050

AUTHOR: Golovanov, N. A.; Kozodayeva, N. M.; Korotin, B. A.; Popkov, G. K. 39

TITLE: Measurement of the dose intensity of neutron radiation with a broad energy spectrum 19 B

SOURCE: Ref. zh. Fizika, Abs. 11A419

REF SOURCE: Tr. Soyuzn. n.-i. in-ta priborostr., vyp. 1, 1964, 36-43

TOPIC TAGS: neutron irradiation, neutron detection, fast neutron, thermal neutron, irradiation dosimetry, radiation instrument

ABSTRACT: The authors discuss the difficulty of constructin an "ideal" dosimetric instrument for neutron radiation in a wide energy range. Two methods of producing pickups with dosimetric characteristics in the energy range from 0.025 ev to 20 Mev are considered. The first is based on using a moderator of definite thickness, which ensures a definite dosimetric character of the variation of the sensitivity curve, and a thermal-neutron detector. Pickups based on this principle are arbitrarily called "isodose" pickups. The second method is based on using the characteristics of scintillation detectors for neutrons, namely the dependence of their sensitivity on the energy, which for a fixed ratio of the sensitivities of the fast- and intermediate-neutron detectors gives a satisfactory approximation of the dosimetric curve. The main shortcomings of these methods are indicated. A brief description is presented of the principle of combined dosimetric neutron detection, which is free

Card 1/2

L 32068-66

ACC NR: AR6016160

of many shortcomings inherent in the "isodose" pickup and the dispersion calibration, based on the method of scintillation dispersion detectors. The advantages of separated pickups over the "isodose," dispersion, and combination pickups are discussed. L. S. [Translation of abstract]

SUB CODE: 18

Card 2/2

S/903/62/000/000/042/044
B102/B234

AUTHORS: Ignat'yev, K. G., Kirpichnikov, I. V., Kozodayeva, N. M., Sukhoruchkin, S. I.

TITLE: Investigation of the γ-rays from neutron resonance capture by heavy nuclei

SOURCE: Yadernyye reaktsii pri malykh i srednikh energiyakh; trudy Vtoroy Vsesoyuznoy konferentsii, iyul' 1960 g. Ed. by A. S. Davydov and others. Moscow, Izd-vo AN SSSR, 1962, 551

TEXT: A brief communication is given on investigations of the γ-ray spectra and angular correlations in the case of neutron resonance capture by W, Pt, Xe, and Ag. The neutron energy was measured by the time-of-flight method with a multi-channel selector. The γ-rays were analyzed with the help of scintillation spectrometers and a pair spectrometer. The spins of several resonance levels were determined by comparing the ground-state transition intensities and measuring the angular correlation of the cascade γ-rays: I = 1 for W^{183} with e_o = 7.6 and 26 ev, for Pt^{195} with E_o = 11.9, 19.6 and 68 ev, and for Xe^{129} with E_o = 9.5 ev; I = 0 for E_o = 102 ev of W^{183}. The

Card 1/2

Investigation of the...

intensities of the transitions from different levels to the ground state differ greatly.

Card 2/2

KOZODAYEVA, R. YE.

112-1-880

Translation from: Referativnyy Zhurnal, Elektrotekhnika, 1957, Nr 1, p. 141 (USSR)

AUTHOR: Kozodayeva, R. Ye.

TITLE: Efficiency of Applying an Electric Drill in Tuymazy (Effektivnost' primeneniya elektrobura v Tuymazakh)

PERIODICAL: Sbornik; 10-aya nauchn.-tekhn. konferentsiya 1955. (Nauchn. stud. o-vo. Mosk. neft.in-t.) Leningrad, Gostoptekhizdat, 1956, pp. 149-160

ABSTRACT: It is pointed out that well drilling with an electric drill in the Tuymazy oil deposit started in 1950. The volume drilled with the electric drill increased 10 times during the period from 1951 to 1954, reaching 25 per cent of the total footage in the Nr 1 drilling office of the "Tuymazaburneft'" trust. During this period the commercial rate in electric drilling increased by 28.6 per cent, the mechanical rate almost two times, footage per bit increased by 29 per cent and the cost of a meter drilled declined by one half. The average technical indexes of drilling with the electric drill proved to be higher than the indexes of the turbine method of drilling. Per element analysis of the cost of 1 meter of drilling demon-

Card 1/2

Efficiency of Applying an Electric Drill in Tuymazy (Cont.)

strates that all outlays with the exception of rolling electric drills are lower in electric drilling than in turbine drilling. It is emphasized that owing to the application of automatic drilling regulators in electric drilling, breakdowns connected with the fracture of bits were eliminated. It is noted that the improvement of the construction of electric drills should aim at lengthening the period of operation of the machine, at the increase of the reliability of the current supply, and at the creation of electric motors of various capacities and rotation velocities for drilling formations of various strengths.

Card 2/2

I.I.S.

KOZODON, M.S.

AID P - 3550

Subject : USSR/Electricity

Card 1/1 Pub. 29 - 14/27

Authors : Kokorev, S. P. and M. S. Kozodon, Engs.

Title : Building a cabinet for placing radio telephone capacitors to raise the power factor

Periodical : Energetik, 11, 17-18, N 1955

Abstract : The State Inspection and Supervision of Industrial and Power Establishments admitted temporarily for use in electric installations radio-telephone capacitors of the KBG-MN and KMBG types. The authors describe two years experience with these capacitors at the "Krasnyy Oktyabr'" Plant in Moscow. They developed and built a special cabinet in which to place the capacitors and describe it in detail. One detailed drawing.

Institution : None

Submitted : No date

Kozopon, M.S.

112-2-3155

Translation from: Referativnyy Zhurnal, Elektrotekhnika, 1957, Nr 2, p. 92 (USSR)

AUTHOR: Kogorev, S.P., Kozodon, M.S.

TITLE: Control Points for Measuring Stray Currents in Street Lighting Cable Networks(Kontrol'nyye punkty dlya zamerov bluzhdayushchikh tokov v kabel'nykh setyakh naruzhnogo osveshcheniya)

PERIODICAL: Gor. kh-vo Moskvy, 1956, Nr 3, pp. 37-39

ABSTRACT: Control points for keeping a check on cathode and anode zone distribution in cable sheathing along the whole cable run are placed at a distance of 300 m from each other. The "Mossvetproyekt" TEU (Technical Electric Administration Office) has worked out designs for control points and developed methods of preparing cables for measuring stray currents in urban street lighting cable networks. It has also worked out a plan for installing control points in cable manholes, in street light pole bases or in sidewalk manholes. Cable manholes and pole bases are preferred for this purpose; control points are installed under the sidewalk only when it is not possible, along a 300 m stretch of low voltage cable run, to make use of existing structures (manholes, street light pole bases, etc). Provision for installing control points is obligatory when laying all cable line. They are built in and wired at the same time the cable is lowered into the trench.

Card 1/2

Control Points for Measuring Stray Currents in Street Lighting Cable Networks (cont)

It is possible to estimate the voltage drop over a length of one meter along the cable sheathing by measuring the potential difference between two end conductors, while the measurement of the voltage between any end and middle conductor gives the potential difference between the cable sheathing and the ground. T.G.T.

Card 2/2

KOZODOY, M.S., inzhener.

New low-voltage panelboards for street lighting. Energetik 5 no.1:24-26 Ja '57. (MLRA 10:2)

(Street lighting) (Electric switchgear)

Kozodon M.S.

KOZODON, M.S., inzhener.

Distribution head for electric lighting. Energetik 5 no.8:27-30 Ag '57. (MLRA 10:10)

(Electric lighting--Machinery)

KOZODOY, M., inzhener.

The color illumination of the jets of small fountains by means of electric lights. Zhil.-kom.khoz.7 no.8:17-18 '57. (MIRA 10:10)

1. Rukovoditel' gruppy masterskoy No.6 Instituta general'nogo plana Moskvy.
(Photoelectricity) (Lighting)

KOZODON, M., inzh., rukovoditel' gruppy

Complete transformer substation. Zhil.-kom.khoz. 7 no.12:17-18 '57. (MIRA 11:12)

1. Institut general'nogo plana Moskvy.
(Electric substations)

SEGEDINOV, A.A., inzh.; KOZODON, M.S., inzh.

Some problems in introducing electric stoves. Gor. khoz. Mosk. 33 no.7:25-28 Jl '59. (MIRA 12:10)

1.Institut general'nogo plana g. Moskvy.
(Stoves, Electric)

L 8157-66 EWT(1)/ETC(m) IJP(c) WW

ACC NR: AP5025727 SOURCE CODE: UR/0286/65/000/018/0080/0080

AUTHORS: Kozodon, M. S.; Malkin, O. A.

ORG: none

TITLE: Apparatus for separation of spectral lines. Class 42, No. 174809

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 80

TOPIC TAGS: spectrometry, spectrometer, spectral line, spectrometer attachment

ABSTRACT: This Author Certificate presents an apparatus for separation of spectral lines, consisting of a mirror attachment to a spectrometer (see Fig. 1).

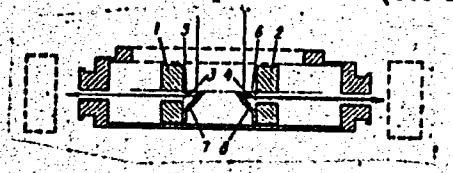


Fig. 1. 1- movable carriers; 3 and 4- transparent windows; 5 and 6- adjustable slits; 7 and 8- mirrors.

To insure simultaneous and separate direction of the spectral lines to the receivers

Card 1/2 UDC: 681.45

L 8157-66
ACC NR: AP5025727 O

the attachment contains two movable carriers equipped with windows for the exit of the spectral lines. The carriers, situated in the focal plane of the apparatus, have adjustable slits and two mirrors situated at right angles to the optical axis of the device in the immediate vicinity of the slits. Orig. art. has: 1 figure.

SUB CODE: NP, EC/ SUBM DATE: 21May64

jw
Card 2/2

KOZODON, M.S.

New transformer substations for street lighting systems.
Trudy LIEI no.51:352-357 '64.
(MIRA 18:11)

KOZODOY, A.

Constructing buildings serving cultural and public needs in Cherkassy Province. Sil'. bud. 9 no.12:3-4 D '59 (MIRA 13:3)

1. Nachal'nik upravleniya stroitel'stva Cherkasskogo oblastnogo sel'skokhozyaystvennogo upravleniya.
(Cherkassy Province--Building)

KOZODOY, A.

The village of Leski has been moved to a new place. Sil'.bud. 10 no.4:11 Ap '60. (MIRA 13:7)

1. Nachal'nik upravleniya stroitel'stva Cherkasskogo oblsel'-khozupravleniya.
(Leski--City planning)

KOZODOY, A.

New villages in Cherkassy Province. Sil'.bud. 12 no.6:9-10 Je '62. (MIRA 15:8)

1. Zamestitel' predsedatelya soveta Cherkasskogo oblastnogo mezhkolkhozstroya.
(Cherkassy Province--Dwellings)

S/191/63/000/004/002/015
B101/B186

AUTHORS: Matveyeva, Ye. N., Kozodoy, A. A., Col'denberg, A. L.

TITLE: Ageing of polyolefins. The relative light resistance of polyolefins

PERIODICAL: Plasticheskiye massy, no. 4, 1963, 7 - 11

TEXT: This is a report on the ageing of high-density polyethylene (HDPE), low-density polyethylene (LDPE), ethylene-propylene copolymer (EPC), and polypropylene (PP) when irradiated with a mercury vapor lamp at 25 - 28°C or weathered in the climatic regions of Tashkent and Leningrad. The change in relative elongation and tensile strength was studied, as well as tan δ at 10^6 cps, and the amount of the fraction insoluble in xylene. Furthermore, the content of CO groups was studied by the IR spectrum, and the change in intrinsic viscosity in decalin at 135°C. Results: Irradiation with UV light rapidly deteriorated all physico-mechanical properties. Brittleness occurred after 50 - 70 hrs in PP, 70 - 100 hrs in LDPE, 100 - 150 hrs in EPC, and 150 - 200 hrs in HDPE. The content of CO groups increased from 0.4 - 0.6 mg/dm^2 in the initial specimen to 7.8 - 9.9 mg/dm^3.

Card 1/2

Ageing of polyolefins. The...

Simultaneously the intrinsic viscosity decreased. In contrast with other polymers, HDPE formed a fraction insoluble in xylene, which reached a content of 40% after 25 hrs and remained unchanged on further irradiation. As regards stability the polymers form the following sequence: PP < LDPE < EPC < HDPE. Weathering causes the same changes in physico-mechanical properties as UV light, the sequence of stability remaining unchanged. In Tashkent, ageing was 1.2 - 2 times faster than in Leningrad. The content of insoluble fraction in HDPE reached approximately 35% after 60 days but was decreased by longer weathering. The most intensive changes occurred during the months of most intensive sunshine, namely April - October. There are 12 figures and 3 tables.

Card 2/2

KOZODOY, Aleksandr Konstantinovich; ZUBAREV, Aleksandr Vasil'yevich; FEDOROV, Vasiliy Sergeyevich; ISAYEVA, V.V., ved. red.; POLOSINA, A.S., tekhn. red.

[Flushing wells in drilling] Promyvka skvazhin pri burenii. Moskva, Gostoptekhizdat, 1963. 171 p. (MIRA 16:5)
(Oil well drilling)

KOZODOY, A.K.

Designing nozzles for hydrodrill percussion tools. Izv.vys. ucheb.zav.; neft' i gaz 1 no.11:49-52 '58. (MIRA 12:5)

1. Groznenskiy neftyanoy institut.
(Nozzles)

KOZODOY, A.K., Cand Tech Sci -- (diss) "Study of submerged streams and caps setting of hydraulic excavator chisels." Baku, 1959, 12 pp (Min of Higher Education USSR. Azerbaydzhan Order of Labor Red Banner Inst of Petroleum and Chemistry im M. Azizbekov) 150 copies (KL, 35-59, 114)

KOZODOY, A.K.

Determining parameters of submerged hydraulic giant jets. Izv. vys. ucheb. zav.; neft' i gaz 2 no.6:103-108 '59. (MIRA 12:10)

1.Groznenskiy neftyanoy institut.
(Jets)

KOZODOY, A.K.

Design and distribution of nozzles in jet bits. Izv.vys.ucheb. zav.; neft' i gaz 2 no.9:37-40 '59. (MIRA 13:2)

1. Groznenskiy neftyanoy institut.
(Nozzles)

FEDOROV, V.S.; KOZODOY, A.K.; ZUBAREV, A.V.

Selecting jetting drilling parameters and the size of nozzle for jet bits. Izv.vys.ucheb.zav.; neft' i gaz 5 no.8:31-36 '62. (MIRA 17:3)

1. Groznenskiy neftyanoy institut i Groznenskiy nauchno-issledovatel'skiy neftyanoy institut.

FEDOROV, V.S.; KOZODOY, A.K.; ZUBAREV, A.V.

Pressure losses in circulation openings and bit nozzles.
Izv. vys. ucheb. zav.; neft' i gaz 5 no.11:25-30 '62.
(MIRA 17:6)

1. Groznenskiy neftyanoy institut.

AZAROVA, M.M., dotsent, kand.ekon.nauk; BAUTINA, N.V., dotsent, kand.ekon. nauk; DOBRUSHIN, I.M., kand.ekon.nauk; KOZODOYEV, I.I., doktor ekonom.nauk, red.; GARSIA, L., red.; ASTAKHOV, V., red.; PROKOP'YEV, S., red.; CHEPELEVA, O., tekhn.red.

[Reader in political economy] Khrestomatiia po politicheskoi ekonomii. Moskva, Izd-vo sotsial'no-ekon.lit-ry, 1960. 759 p. (MIRA 13:12)

(Economics)

AZAROVA, M.M., kand. ekon. nauk, dots.; BAUTINA, N.V., kand. ekon. nauk, dots.; DOBRUSHIN, I.M., kand. ekon. nauk; MAKHON'KO, T.P., kand. ekon. nauk, dots.; TOLYPIN, Yu.M., kand.ekon nauk, dots.; KOZODOYEV, I.I., doktor ekon.nauk, prof., red.; GARSIA, L., red.; MITINA, M., red.; DARONYAN, M., mladshiy red.; KRYLOVA, I., mladshiy red.; NOGINA, N., tekhn. red.

[Chrestomathy in economics] Khrestomatiia po politicheskoi ekonomii. 2., perer. i dop. izd. Moskva, Sotsekgiz, 1963. 798 p. (MIRA 16:4)

(Economics)

KOZODOYEV, Ivan Iosifovich, prof.; LI, V.G., otv. red.; PILIPYUK,V., red.

[Conversion of science into a direct productive force of society] Prevrashchenie nauki v neposredstvennuiu proizvoditel'nuiu silu obshchestva. Dushanbe, Izd-vo "Irfon," 1965. 24 p. (MIRA 18:10)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova (for Kozodoyev).

KOZOJED, Vaclav; HUDECEK, Slavko

Agglutination of powdery phenolic cements. Chem prum 13 no. 12: 669-671 D '63.

1. Moravske chemicke zavody, n.p., Ostrava.

KOZOK, J.

A new method of measuring effective attenuation of electric transmission lines. Biuletyn. p. 13

ENERGETYKA (Ministerstwo Gornictwa i Energetyki oraz Stowarzyszenie Elektrykow Polskich) Bytom, Poland. Vol. 13, no. 6, June 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 9, September 1959 Uncl.

SEMENOVA, A.S.; PARAMONKOV, Ye.Ya.; FEDOTOV, B.G.; GOL'DENBERG, A.L.; IL'CHENKO, P.A.; CHAPLINA, A.M.; SKURIKHINA, V.S.; SAZHIN, B.I.; MATVEYEVA, Ye.N.; KOZOLA, A.A.; DYN'KINA, G.M.; SIROTA, A.G.; RYBIKOV, Ye.P.; GERBILSKIY, I.S.; SHCHUTSKIY, S.V., red.; SHUR, Ye.I., red.

[Medium pressure polyethylene] Polietilen srednego davleniia. Moskva, Khimiia, 1965. 89 p. (MIRA 18:7)

1. Nauchno-issledovatel'skiy institut polimerizatsionnykh plastmass (for all except Shchutskiy, Shur).

KOZOLETSKAYA, M.N.

USSR /Microbiology. Medical and Veterinary Microbiology. F-6

Abs Jour: Referat. Zh.-Biol., No. 9, 1957, 35759

Author : Drozdov, A.I.; Kozoletskaia, M.N.

Title : Concerning the Influence of Dry Heat on Dermatophytes in Cultures and Pathological Material

Orig Pub: V sb., Eksperim. i klinich. issledovaniia, II, L, Medgiz, 1956, 70

Abstract: In air dried disinfectant chambers were placed pieces of 30-day cultures of dermatophytes and also hairs and scales from persons sick with dermatomycoses. The viability of the dermatophytes in the pure cultures was less than that in the pathological material. The majority of the dermatophytes perished in the pure cultures after being heated for 30 minutes to 100 degrees,

Card 1/2

USSR /Microbiology. Medical and Veterinary Microbiology. F-6

Abs Jour: Referat. Zh.-Biol., No. 9, 1957, 35759

but in the pathological material only after 30 minutes of heat at 120 degrees. To verify the viability of the dermatophytes it is recommended that the sowings be made not on solid but on liquid nourishing mediums.

Card 2/2

KOZOLOV, N.S.

Establishment of structure of hydroxy acids. Uspekhi Khim. 21, 106-9 '52. (CA 48 no.2:591 '54) (MLRA 5:3)

KOZOLOVA, Ye.N. and DVORTSOVA, Ye.I.

"Toxification of Plants by Organic Insecticides." Dok. Lenin. Akad. Selsk. Nauk. 1952, 4, 41-48.

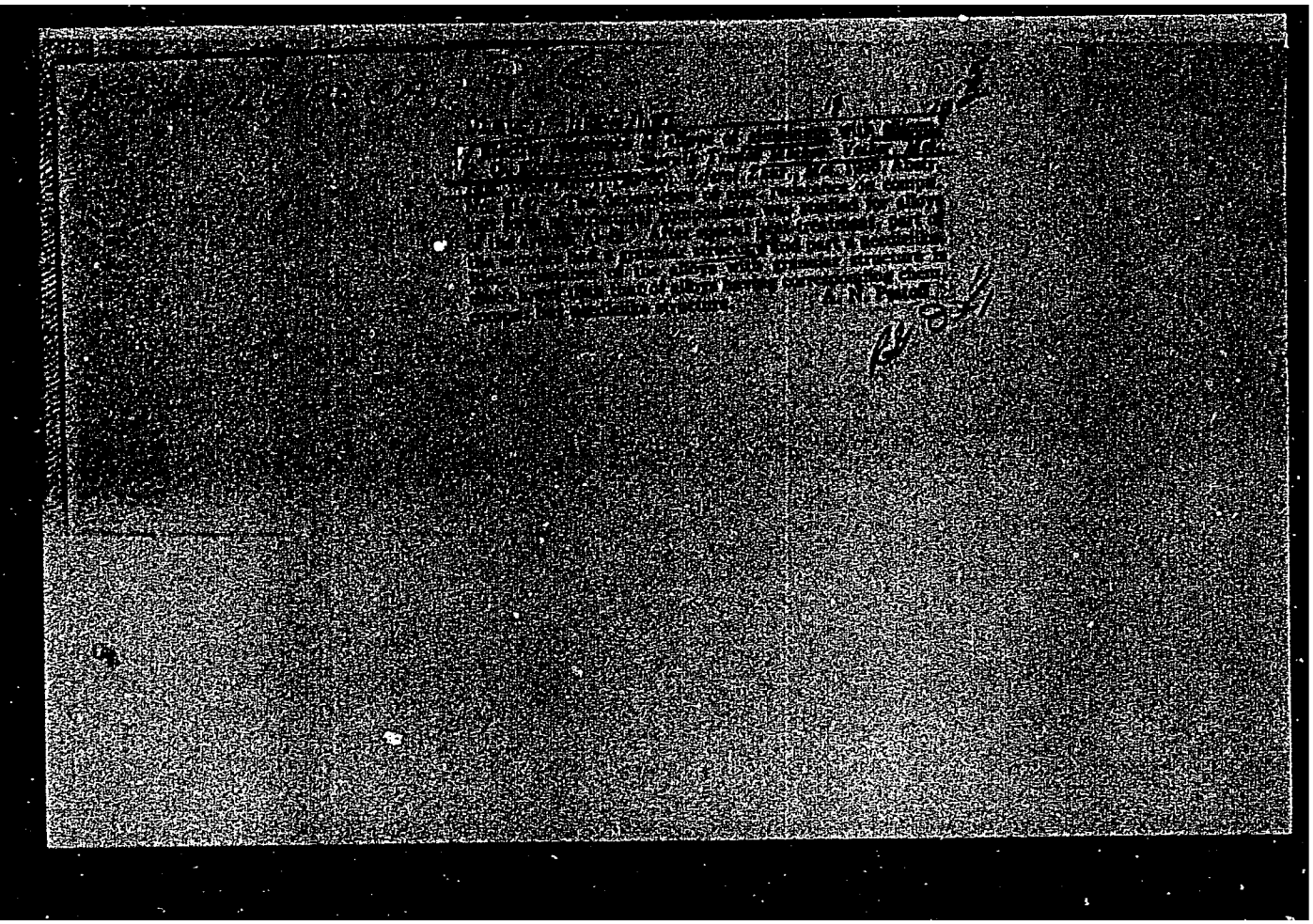
SO: Translation-252467, 30 Apr 1954.

KOZOIUPOVA, R. G.

"Investigation of the Dependence of the Hardness and Electrical Resistance of Two-Phase Alloys on Their Composition and Structures." Sub 25 Jun 51, Moscow Inst of Nonferrous Metals and Gold imeni M. I. Kalinin

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55



ADAMOVIC, V.M., dipl. hem.; HUS-MARKOVIC, M., mr. farm.;
KOZOMARA, S., apsol. hemije

Isolation and identification of certain carbohydrates in dehydrated juice of sweet cabbage by means of one-dimensional paper chromatography. Glas. hig. inst. 9 no.1/2:45-55 '60.

(VEGETABLES) (CARBOHYDRATES chem)

DRASKOVIC, R.; MAKSIMOVIC, Z.; KOZOMARA, S.

51

Production of Cr of high specific activity. Bul Inst Nucl 14 no. 3: 143-153 Jl '63.

1. Hot Laboratory Department, Boris Kidric Institute of Nuclear Sciences, Beograd-Vinca.

DRASKOVIC,R.; MAKSIMOVIC,Z.; KOZOMARA,S.

Obtaining ^{51}Cr of high specific activity; abstract. Glas Hem dr 27 no.9/10:529 '64

1. The Boris Kidric Institute of Nuclear Sciences, Hot-Laboratory Department, Belgrade-Vinca.

DOMSHLAK, M.P.; KOZONOVA, L.B.

Use of pentoxyl in radiation leukopenia in man [with summary in English]. Med.rad. 3 no.4:29-33 Jl-Ag '58. (MIRA 12:3)
(URACIL, rel. cpds.
5-hydroxymethyl-4-methyluracil, ther. of leukopenia induced by x-ray ther. (Rus))
(ROENTGEN RAYS, effects,
leukopenia, eff. of 5-hydroxymethyl-4-methyluracil (Rus))
(LEUKOCYME COUNT,
leukopenia induced by x-ray ther., eff of 5-hydroxymethyl-4-methyluracil (Rus))

ONITSEV, P.I. [deceased]; KOZOPOLYANSKAYA, M.M.

Pharmacology of chlorpropamide. Farmakol. toksik. 26 no.3: 319-322 My-Je'63 (MIRA 17:2)

1. Otdel farmakoterapii (zav. - prof. P.I. Onitsev) Ukrainskogo instituta eksperimental'noy endokrinologii.

KOZOPOLYANSKAYA, M.M.

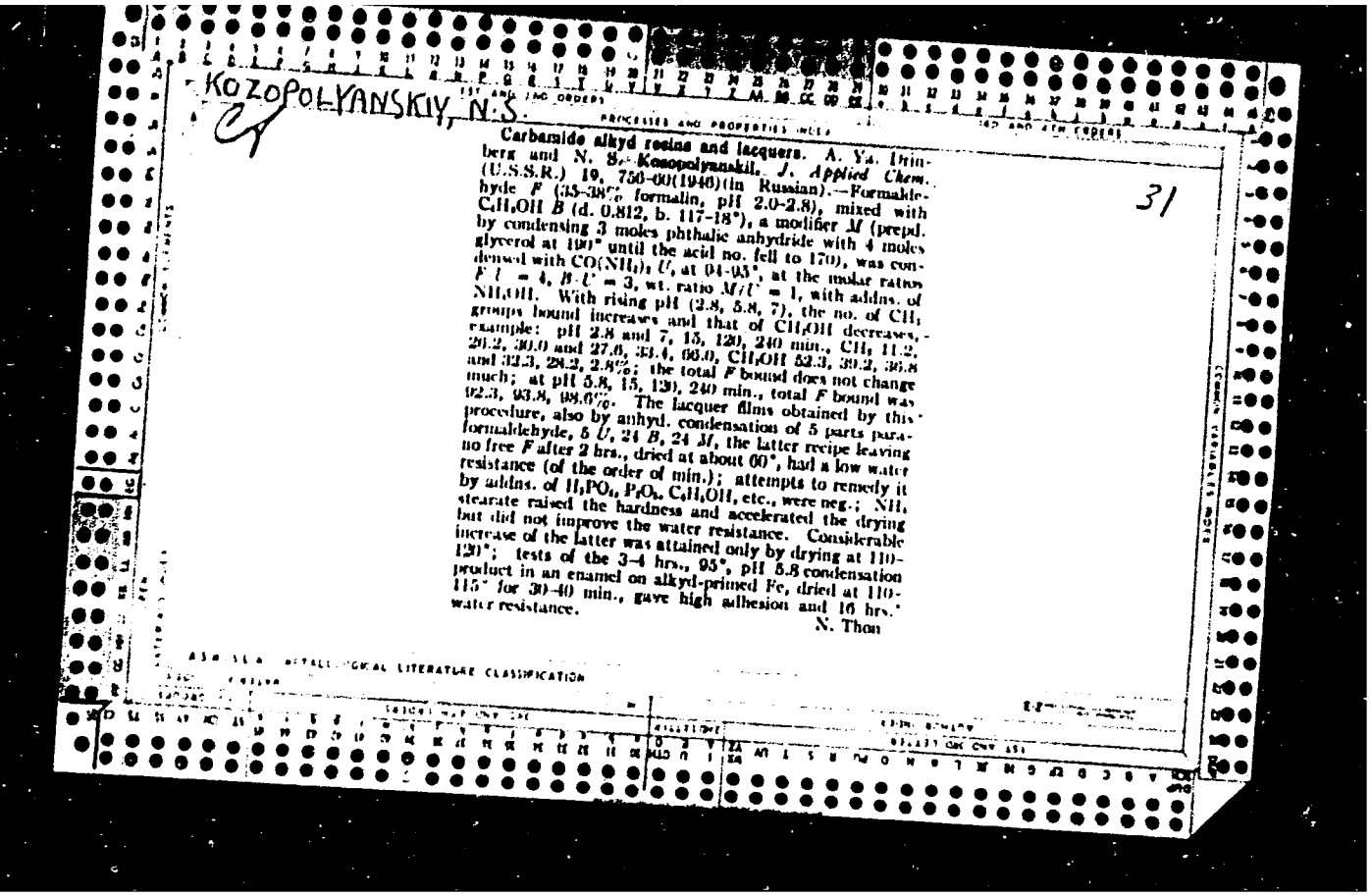
Effect of chlorpropamide on the cardiovascular system of normal rabbits. Trudy Ukr. nauch.-issl. inst. eksper. endok. 19:97-100 '64. (MIRA 18:7)

1. Iz otdela farmakoterapii Ukrainskogo instituta eksperimental'noy endokrinologii.

KOZO-POLYANSKIY, B.M.

A very modern problem. Trudy Tom. obl kraeved. muz. 6 no.1:9 '62.
(MIRA 17:11)

1. Chlen-korrespondent AN SSSR.



KOZOPOLYANSKIY, N.S.

31

Carbamide alkyd resins and lacquers. A. Ya. Drimberg and N. S. Kozopolyanskii. *J. Applied Chem.* (U.S.S.R.) 19, 750-60(1946)(in Russian).—Formaldehyde *F* (35-38% formalin, pH 2.0-2.8), mixed with C_4H_9OH *B* (d. 0.812, b. 117-18°), a modifier *M* (prepd. by condensing 3 moles phthalic anhydride with 4 moles glycerol at 190° until the acid no. fell to 170), was condensed with $CO(NH_2)_2$ *U*, at 94-95°, at the molar ratios *F*:*U* = 4, *B*:*U* = 3, wt. ratio *M*:*U* = 1, with addns. of NH_4OH. With rising pH (2.8, 5.8, 7), the no. of CH_2 groups bound increases and that of CH_2OH decreases, e.g.: pH 2.8 and 7, 15, 120, 240 min., CH_2 11.2, 26.2, 30.0 and 27.6, 33.4, 66.0, CH_2OH 52.3, 39.2, 36.8 and 33.3, 28.2, 2.8%; the total *F* bound does not change much; at pH 5.8, 15, 120, 240 min., total *F* bound was 92.3, 93.8, 99.6%. The lacquer films obtained by this procedure, also by anhyd. condensation of 5 parts paraformaldehyde, 5 *U*, 24 *B*, 24 *M*, the latter recipe leaving no free *F* after 2 hrs., dried at about 60°, had a low water resistance (of the order of min.); attempts to remedy it by addns. of H_3PO_4, P_2O_5, C_4H_9OH, etc., were neg.; NH_4 stearate raised the hardness and accelerated the drying but did not improve the water resistance. Considerable increase of the latter was attained only by drying at 110-120°; tests of the 3-4 hrs., 95°, pH 5.8 condensation product in an enamel on alkyd-primed Fe, dried at 110-115° for 30-40 min., gave high adhesion and 16 hrs. water resistance.

N. Thon

KOZOPOLYANSKIY, N.S.; KRETOV, A.Ye; OKHRAMOVICH, A.Ye.; ILYASH, I.I.

Use of fluorene-9,9-dipropionic acid for modification of polyester resins. Plast. massy no.11:14-15 '63. (MIRA 16:12)

ACCESSION NR: AR3000210 S/0081/63/000/006/0662/0662

SOURCE: RZh, Khimiya, Abs. 6Zh153

AUTHOR: Kozopelyanskiy, N. S.; Kretov, A. Ye; Shapovalov, L. D.

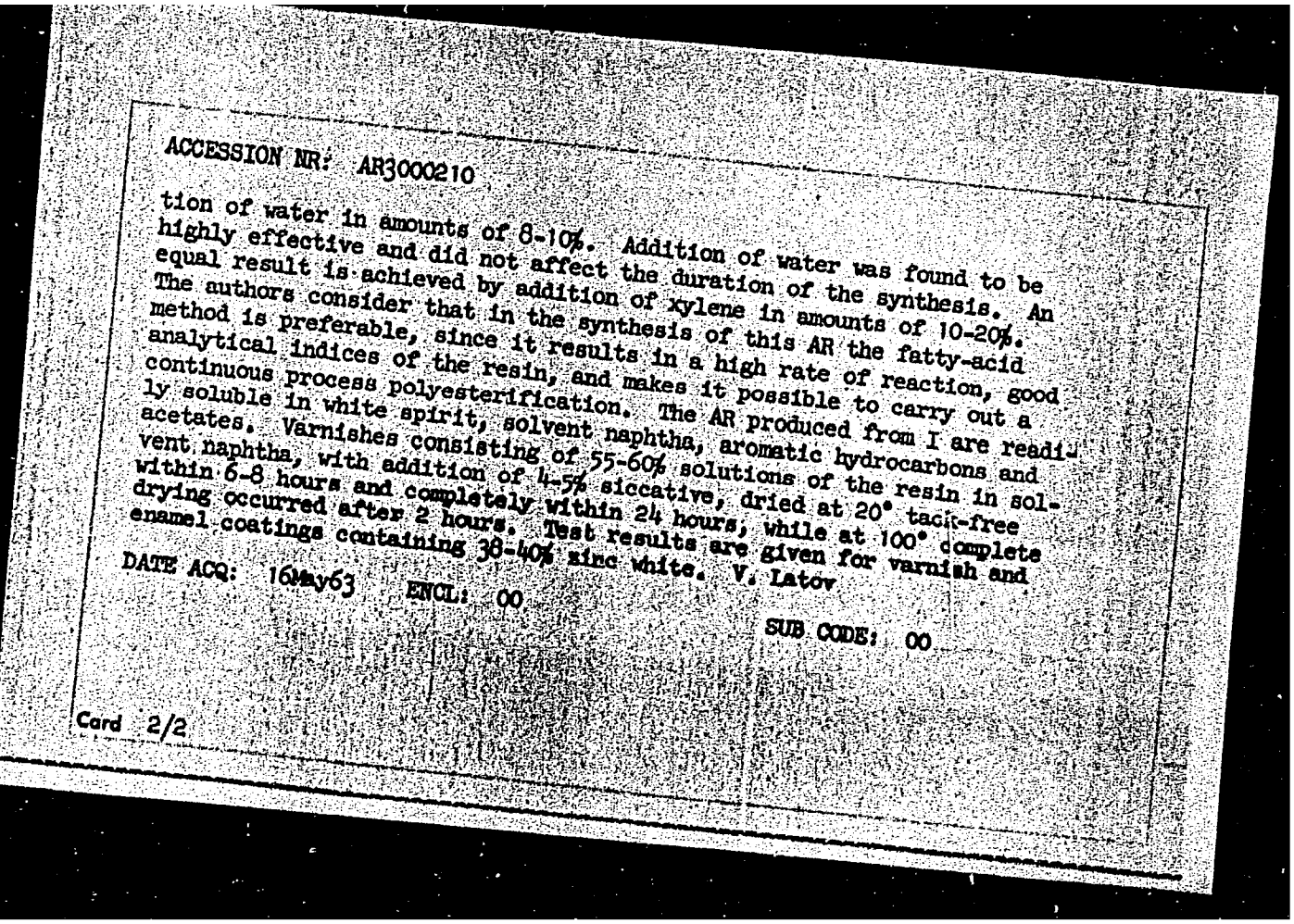
TITLE: Synthesis of fluorene-9, 9-dipropionic acid base alkyd resins.

CITED SOURCE: Lakokrasochn. materialy i ikh primeneniye, no. 3, 1962, 36-39

TOPIC TAGS: Synthesis, fluorene-9, alkyd resins

TRANSLATION: An alkyd resin (AR), modified with vegetable oil fatty acids, was synthesized from fluorene-9, 9-dipropionic acid (I) and pentaerythritol. The reaction was conducted at 200, 220 and 240°. It was found that I has a high specific reactivity which is of particular interest in the synthesis of AR. At these temperatures, especially at 240°, I undergoes partial decarboxylation which has an adverse effect on the color of AR. To obviate this effect, syntheses were carried out with addi-

Card 1/2



ACCESSION NR: AR3000210

tion of water in amounts of 8-10%. Addition of water was found to be highly effective and did not affect the duration of the synthesis. An equal result is achieved by addition of xylene in amounts of 10-20%. The authors consider that in the synthesis of this AR the fatty-acid method is preferable, since it results in a high rate of reaction, good analytical indices of the resin, and makes it possible to carry out a continuous process polyesterification. The AR produced from I are readily soluble in white spirit, solvent naphtha, aromatic hydrocarbons and acetates. Varnishes consisting of 55-60% solutions of the resin in solvent naphtha, with addition of 4-5% siccative, dried at 20° tack-free within 6-8 hours and completely within 24 hours, while at 100° complete drying occurred after 2 hours. Test results are given for varnish and enamel coatings containing 38-40% zinc white. V. Latov

DATE ACQ: 16May63 ENCL: 00 SUB CODE: 00

Card 2/2

GANZ, Semen Naumovich; YEMEL'YANOV, Miney Stepanovich; PARKHOMENKO, Vladimir Dmitriyevich; PANASYUK, V.G., doktor tekhn. nauk, prof. retsenzent; BLOKH, G.A., doktor khim. nauk, prof., retsenzent; KOZOPOLYANSKIY, N.S., dots., otv. red.; DEREVYANCHENKO, R.M., red.

[Plastics in the instrument industry] Plastmassy v apparatostroenii. Khar'kov, Izd-vo Khar'kovskogo univ., 1963. 198 p. (MIRA 18:6)

KOZOREVSKI, P.

Cooperation between the tractor station and the collective farms in lowering production costs. p. 1

SOTSIALISTLIK POLLUMAJANDUS. POLLUMAJANDUSE MINISTEERIUM.
Tallinn, Hungary. No. 1, 1958

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 11
November 1959.

Uncl.

KOZOREZ, A. B.

Using carbonic acid for mixing beers. Spirt. prom 22 no.3: 38 '56. (MLRA 9:11)

1. Spaso-Sergiyevskiy spirtovyy zavod.
(Beer) (Carbon dioxide)

KOZOREZ, A.B.

Signal system for intake of beer into beer column. Spirt. prom. 24 no.2:32 '58. (MIRA 11:3)

(Distillation apparatus)

ACC NR: AP6021426

SOURCE CODE: UR/0413/66/000/011/0025/0025

INVENTORS: Dekhtyarev, V. L.; Kozorez, A. I.; Olesevich, Ye. K.

ORG: none

TITLE: A method for starting a heat power system using low boiling materials. Class 14, No. 182178

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 25

TOPIC TAGS: engine starter system, thermodynamic cycle, engine component

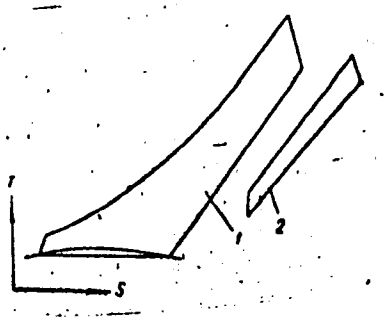
ABSTRACT: This Author Certificate presents a method for starting a heat power system using low boiling materials, as explained in Author Certificate No. 143815. To lower the power of the starting motor, the system is started after the working cycle is divided into a cycle with liquid compression and a cycle with gas compression (see Fig. 1).

Card 1/2

UDC: 621.11-176.2-574

ACC NR: AP6021426

Fig. 1. 1 - liquid compression cycle; 2 - gas compression cycle



Orig. art. has: 1 figure.

SUB CODE: ~~13~~ 10/ SUBM DATE: 14Nov64

Card 2/2

L 3454-65

ACCESSION NR: AP5009157 S/0114/64/000/011/0020/0022

AUTHOR: Gokhshteyn, D. P.(Doctor of technical sciences); Dekhtyarev, V. L. (Candidate of technical sciences); Tishchenko, B. S. (Engineer); Olesevich, K. (Engineer); Khalaydzhi, V. N.(Engineer); Ryabova, A. S. (Engineer); Bykov, V. N. (Engineer); Kozorez, A. I. (Engineer)

TITLE: Medium power carbon dioxide power installation

SOURCE: Energomashinostroyeniye, no.11, 1964, 20-22

TOPIC TAGS: electric power plant, carbon dioxide, electric power source

ABSTRACT: Theoretical principles for carbon dioxide power installations worked out at the Odessa Technological Institute imeni M. V. Lomonosov have shown the possibility for building high power compact units which are more economical than steam and gas turbines. Results of research on an installation of this type with a power of 50 Mw, the UKEU-50, show that the efficiency advantage of the carbon dioxide installation over steam units increases with a transition from high to medium power.

Card 1/3

L 33542-65

ACCESSION NR: AP5009157

Following is the efficiency of the installation and its elements:

Generator power of the installation N, Mw	50.0
Consumption of carbon dioxide G, kg/sec	269.0
Efficiency, %:	
of the compressor, n_c	0.88
of the pump, n_p	0.80
of the turbines, n_t	0.90
of the boiler, n_b	0.92
of the generator, n_g	0.985
mechanical, n_m	0.99
of the thermal flow, n_{tf}	0.99
of internal requirements, n_{ir}	0.97
electrical efficiency of the engine room, n_e	44.1
net, n_{net}	39.0

Card 2/3

L 32847-65

ACCESSION NR: AP5009157

In spite of the low starting temperature of 565°, the 39% efficiency of the carbon dioxide installation exceeds that of gas turbine units with a starting temperature of 675° and higher. Orig. art. has: 1 table, 3 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: EE

NO REF SOV: 008 OTHER: 000 JPRS

Card 3/3

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000825920

GOKHSHTEYN, D.P., doktor tekhn. nauk; DEKHTYAREV, V.L., kand. tekhn. nauk; OLESEVICH, Ye.K., inzh.; TISHCHENKO, B.S., inzh.; KHALAYDZHI, V.N., inzh.; RYABOVA, A.S., inzh.; BYKOV, V.N.; KOZOREZ, A.I., inzh.

Carbon dioxide system with medium power output. Energomashinostroenie 10 no.11:20-22 N '64 (MIRA 18:2)

KOZOREZ, A.T.

Using ammonium chloride in the softening of water. Spirt. prom. 25 no.5:41 '59. (MIRA 12:10)
(Alcohol) (Water--Softening)

SHEYN, S.M.; KOZOREZ, L.A.; VOROZHTSOV, N.N., akademik

Replacement of aromatically bound chlorine by the amino group. Part 10: Reaction kinetics of ortho-chlorobenzotrifluoride, 2-chloro-1,4-bis-(trifluoromethyl)-benzene, and 4-chloro-1,3-bis-(trifluoromethyl)-benzene with an aqueous solution of ammonia. Izv. SO AN SSSR no.7 Ser. khim. nauk no.2:85-89 '65. (MIRA 18:12)

1. Novosibirskiy institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR. Submitted June 23, 1964.

SHEYH, S.M.; KOZOREZ, L.A.

Reaction of o-nitrochlorobenzene with ammonia solution. Ukr. khim. zhur. 30 no.12:1232-1234 '64 (MIRA 18:2)

1. Dneprovskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta organicheskikh poluproduktov i krasiteley.

BURNASHEV, [illegible]; KAPALKINA, I.G.; [illegible], V.I.; [illegible], Yu.N.

1-Arenesulfonyl-2-ethyl-[illegible]-ethyleneimides. Ukr. khim. zhur. 30 no.9:934-937 '64. (MIRA 17:10)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R00082592O(

POLIVODA, A., kand.biologicheskikh nauk; KOZOREZOV, A., inzh.

Decatron-type erythrocyte and leucocyte counting device. Radio no.9:22-24 S '62. (MIRA 15:9)
(Electronics in medicine)

L 21785-65 EEC-4/EEO-2/EWP(j)/EWT(c)/EWT(m)/FA/EWP(h)/T/EWA(d) Pc-4/Pq-4/Pk-4/
Pi-4/Pn-4/Po-4/Pu-4 RM/BC

ACCESSION NR: AP5002957 S/0209/65/000/001/0048/0051

AUTHOR: Glukharev, A. (Engineer, Lieutenant Colonel); Kozorezov, A.
(Engineer, Colonel)

TITLE: Aerostats and airships

SOURCE: Aviatsiya i kosmonavtika, no. 1, 1965, 48-51

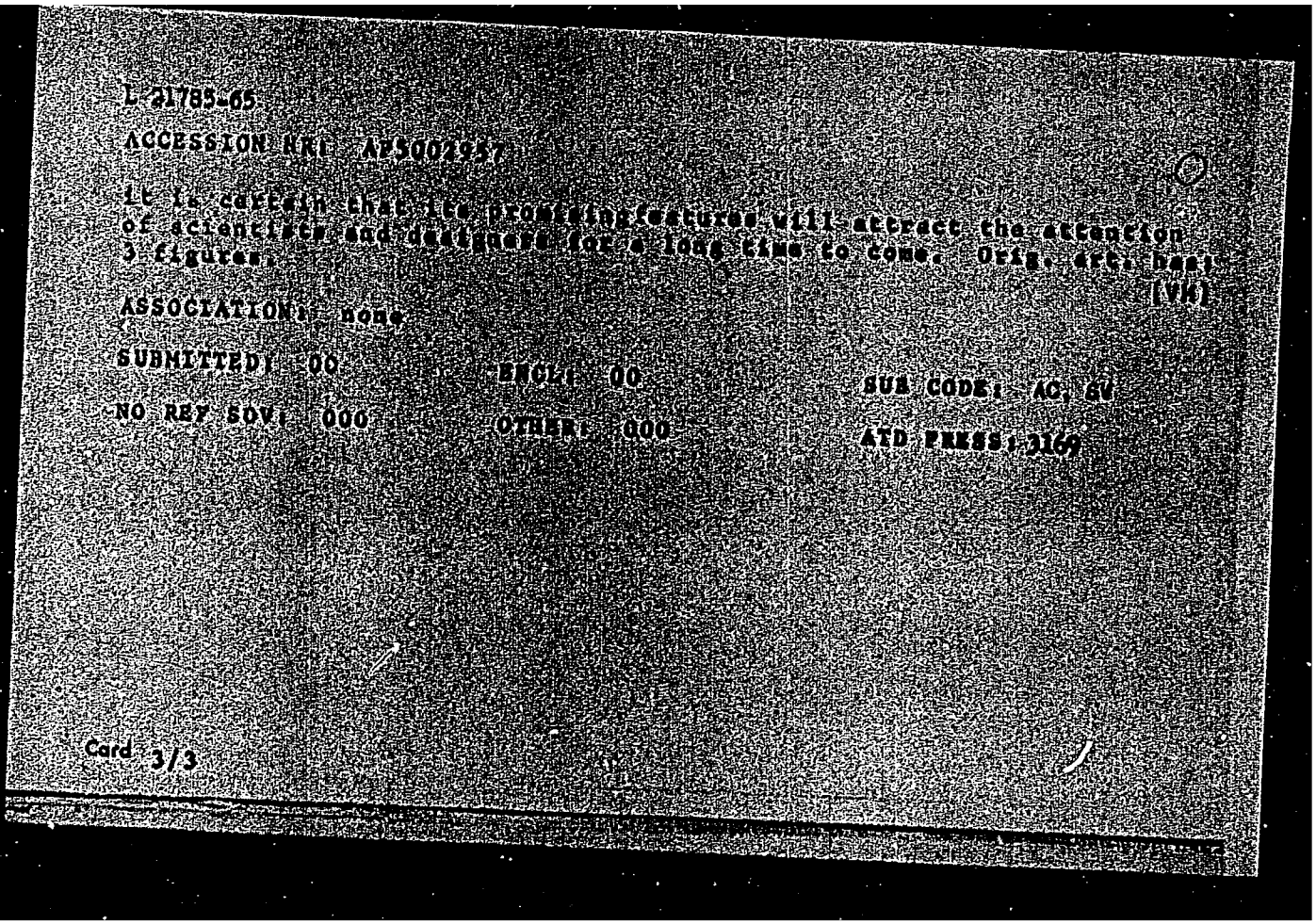
TOPIC TAGS: aerostat, airship, dirigible, air navigation

ABSTRACT: The latest developments in the chemistry of polymers,
automatic controls, radio electronics, and meteorology have been
applied to the design and construction of lighter-than-air craft in
a new perspective. The new aerostats will look like their prototypes;
however, their payload will no longer include the ballast which had
imposed certain limits to flight duration, altitude, and load-lifting
capacity. The future aerostats will use liquid hydrogen, automatic
flight controls, and improved envelopes. The envelopes are now being
made essentially of durable polyethylene film measuring 30—60 μ in
thickness and weighing 28—55 g per square meter. It can be safely
predicted that coatings dozens of times as durable and only 5 μ thick

Card 1/3

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000825920(

will soon be made. A great deal of interest has been aroused by the "helio-barge" project which combines the lift of an aerostat with the thrust of a helicopter. Tests have shown that a helicopter with a lift of 200 kg, when fitted out with a spherical 1000-m³ envelope (lift, 800 kg), can carry one additional ton at a speed of 25 km/hr. Besides the standard fuel, the hydrogen contained in the aerostat's envelope and the surface can be used as sources of energy for small engines. The airships of the future will also differ substantially from the early models. They will most probably resemble a huge rocket with a thin metallic or plastic envelope and filled with non-combustible helium gas. Among the technical problems awaiting an early solution, the most important include the control of gas lift by the heating and the cooling of the gas, a concept first advanced by K. E. Tsiolkovskiy, and the flight control of an airship without using an engine, an idea expressed by A. Snegirev. According to Snegirev, an airship can be set in motion by varying the lift of the gas while deflecting a special control plane. The airship would then acquire a velocity component directed toward the horizon at an angle, i.e., it would travel forward by alternately ascending and descending in the air. Whatever shape the future airship might have,



L 21785-65

ACCESSION NR: AP5002957

It is certain that its promising features will attract the attention of scientists and designers for a long time to come. Orig. art. has: 3 figures.

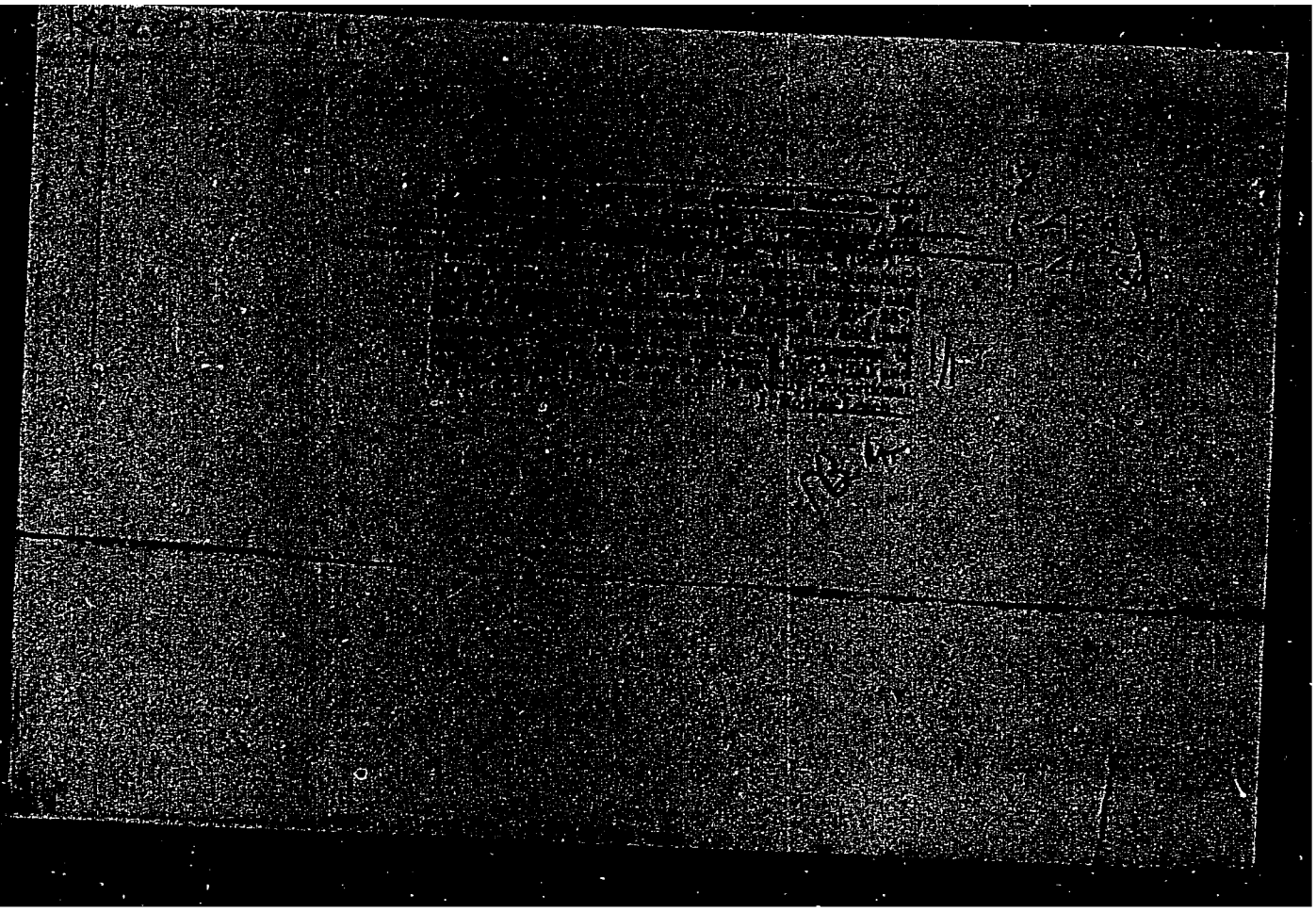
[VA]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: AC, GU

NO REF SOV: 000 OTHER: 000 ATD PRESS: 3169

Card 3/3



ACC NR: AP6036840 SOURCE CODE: UR/0020/66/171/002/0324/0326

AUTHOR: Kozorezov, K. I.; Mirkin, L. I.

ORG: Scientific Research Institute of Mechanics, Moscow State University im. M. V. Lomonosov (Nauchno-issledovatel'skiy institut mekhaniki Moskovskogo gosudarstvennogo universiteta)

TITLE: Metal hardening under the effect of cumulative shock waves

SOURCE: AN SSSR. Doklady, v. 171, no. 2, 1966, 324-326

TOPIC TAGS: metal hardening, shock wave, shock wave metal hardening

ABSTRACT: The possibility of additional hardening of explosion-hardened metal by means of cumulative shock waves has been investigated. The cumulative shock waves were produced by shooting a low-carbon steel (St. 10) plate at a velocity of 3.69 mm/sec against a copper tube. Metallographic analysis showed that the basic structure of the plate consisted of approximately equiaxial grains about 50 μ in diameter, a typical structure for low-carbon steel and iron subjected to explosive deformation. Analysis of the crater caused by the impact revealed that there were several zones with quite different structures and hardness. The zone next to the crater surface consisted of large, equiaxial grains about 30 μ in size and had a hardness of 220 kg/mm^2, i.e., much higher than the initial hardness of ferritic grains in undeformed steel (170 kg/mm^2). The second zone consisted of fine equiaxial grains about 5 μ in size, and its hardness was 200 kg/mm^2. Around the side

Card 1/2 UDC: 539.893

ACC NR: AP6036840

walls of the crater, there was a zone containing large grains whose hardness was 300 kg/mm^2. In the lower part of the crater not in contact with the tube during the test, a specific microstructure consisting of deformed grains with a large amount of twins was found. The hardness of this zone was 370 kg/mm^2. It is concluded that explosion-hardened low-carbon steel can be additionally hardened by cumulative shock waves. Orig. art. has: 3 figures.

SUB CODE: 11/ SUBM DATE: 20Sep65/ ORIG REF: 004/ OTH REF: 001/ ATD PRESS: 5108

Card 2/2

KOZOREZOV, M.A.

Translation from: Referativnyy Zhurnal, Elektrotekhnika, 1957, Nr 2, p. 110 (USSR) 112-2-3283

AUTHOR: Kozorezov, M. A.

TITLE: A Device for Edge-wise Winding of Coils with Band Copper (Prisposobleniye dlya namotki katushek iz shinnoy medi na rebro)(Proposed by A. V. Konashinskiy)(Predlozheniye A. V. Konashinskogo)

PERIODICAL: Sb. rats. predlozheniy. M-vo elektrotekhn. prom-sti SSSR, 1955, Nr 55, pp. 3-5

ABSTRACT: The device is used in winding coils with oval form cores. The design of the device, the basic part of which is a rotating pinion and two racks, is described. When the pinion engages one rack, the form is put into forward movement, while engaging the two racks simultaneously rotates the form through an angle of 180°. The transition from the forward to the rotating movement takes place automatically. The device is reliable in operation and is highly productive. L.A.Ya.

Card 1/1

KOZOREZOV, M.A.

112-2-3284

Translation from: Referativnyy Zhurnal, Elektrotekhnika, 1957, Nr 2, p. 110 (USSR)

AUTHOR: Kozorezov, M. A.

TITLE: A Device for Guiding Insulation Tape During Coil Winding (Proposed by S. N. Tsykunov) (Prisposobleniye dlya napravleniya izolyatsionnoy lenty pri namotke katushek) (Predlozheniye S. N. Tsykunova)

PERIODICAL: Sb. rats. predlozheniy. M-vo elektrotekhn. prom-sti. SSSR, 1955, Nr 56, pp. 19-20

ABSTRACT: A device has been proposed for guiding and tightening asbestos-paper tape serving as turn-to-turn insulation in flatwise winding polar coils from bus copper. The device is of simple design, improves the quality of coil windings and increases worker productivity. B. K. K.

Card 1/1

SOV/112-58-2-2184

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1958, Nr 2, p 62 (USSR)

AUTHOR: Kozorezov, M. A.

TITLE: A Device for Wire Stretching in Spool-Section Winding (a suggestion by A. B. Konashinskiy, I. G. Titov, V. A. Panchenko) (Prisposobleniye dlya natyazheniya provodov pri namotke sektsiy/Predlozheniye A. V. Konashinskogo, I. G. Titova, V. A. Panchenko/)

PERIODICAL: Sb. rats. predlozh. M-vo elektrotekhn. prom-sti SSSR, 1956, Nr 6 (54), pp 11-12

ABSTRACT: A device is described that is intended for simultaneously winding spool sections for DC machines with 14 PELShD and PBD wires 0.86 mm and heavier in diameter. Uniform tension of all wires is assured.

Card 1/1

KOZOREZOV, M.A., inzh.-konstruktor (g. Novocherkassk)

Electric drive systems for auxiliary mechanisms used on a.c. electric locomotives. Elek. i tepl.tiaga 2 no.4:13-15 Ap '58. (MIRA 12:3)

(Electric locomotives)
(Electric driving)

Kozorezov, M.A.

AUTHORS: Zolotarev, P.A. (Engineer), Kozorezov, M.A. (Engineer) & Sitnik, N.Kh. (Engineer) 110-2-7/22

TITLE: The drive of auxiliary equipment in a.c. electric locomotives. (Privod vspomogatel'nykh mekhanizmov elektrovozov peremennogo toka.)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, No.2, pp.24-28. (USSR)

ABSTRACT: With the increasing development of 50 c/s locomotives, more attention must be paid to the drive of auxiliaries. The main auxiliaries are compressors, fans, pumps and low voltage d.c. generators, all being constant-speed and-torque machines except the compressor. In addition to the usual requirements, such as reliability and simplicity of servicing, they must withstand ambient temperatures ranging between +40 and -50°C. and supply-voltage variations of +10 and -30%. The starting torque required of the driving motor of a compressor type Э-500 and the ambient temperature are related in Fig.1, based on the experimental data by Engineer G.G. Rekus of the Moscow Higher Technical College. Auxiliary equipment is supplied from a special single-phase winding on the locomotive power transformer. The first Soviet main-line a.c. 50 c/s locomotive type OP-22, constructed in 1938, used 3-phase induction motors supplied by a synchronous phase-splitter for auxiliary drive. In 1954 the Novocherkassk Electric Locomotive Works produced 50 c/s locomotives type НО in which the auxiliaries are driven by capacitor-start induction motors. Abroad, extensive use is

Card 1/3

made of induction motors. The use of capacitor-start induction motors is then further considered. The motors may be ordinary 3-phase machines in which the main winding consists of two phases of the three-phase winding connected in series, the third phase forming the capacitor winding. Various special features are then discussed. The torque curve of the pump motor used in locomotive type HO is given in Fig.2. A trough in the curve, at one-fifth synchronous speed, makes the motor unsuitable for practical purposes. The system has a number of other disadvantages in rolling stock, although it does give a high power-factor. The system using three-phase induction motors supplied by a phase-splitter is then discussed. The latter is described; its circuit is given in Fig.3 and vector diagram in Fig.4. Graphs of the mechanical characteristics of induction-motor type AC81-6 with a number of variants of supply are given in Fig.5. The influence of the leakage reactance of the phase-splitter windings on the starting characteristics of the motor will be noticed. In further discussing characteristics of phase-splitters it is claimed that motors so supplied have better starting characteristics than capacitor motors, and do not involve disconnection of starting capacitances. Operating experience shows that failure to disconnect burns out the motor winding. In capacitor motor schemes the cost of auxiliary drives is about double that obtaining when a phase-splitter is used. The latter is, therefore,

The drive of auxiliary equipment in a.c. electric locomotives. 110-2-7/22

recommended, particularly for rectifier locomotives in which the power-factor can be improved by installing synchronous compensators on the locomotive and combining the phase-splitter and compensator in one machine. A series d.c. motor supplied through a rectifier or alternatively a single-phase commutator motor is advised for the compressor drive. There are 5 figures, 3 literature references (2 Russian).

SUBMITTED: July, 1, 1957

ASSOCIATION: The Novocherkassk Electric Locomotive Works (Novocherkasskiy elektrovozostroitel'nyy zavod)

AVAILABLE: Library of Congress.

Card 3/3

AUTHOR: Kozolezov, M.A., Engineer SOV/144-59-8-10/14

TITLE: The Technical and Economic Characteristics of Systems of Auxiliary Machines on Main-line a.c. Electric Locomotives

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, 1959, Nr 8, pp 95-97 (USSR)

ABSTRACT: Previous articles have described different methods of driving auxiliaries on a.c. electric locomotives. This article considers the technical and economic characteristics of the auxiliary machine systems of an ignitron electric locomotive. Such a system should be evaluated on the basis of its weight and cost, efficiency and power factor. These depend not only on the method of drive but also to some extent on the voltage at the traction motor commutators. Table 1 gives technical and economic data for various systems of auxiliary machines in a modern ignitron 6-axle electric locomotive type N-60 with traction motors of about 700 kW and a commutator voltage of 1500 V. Capacitor and split-phase induction motors are considered as well as standard series motors types AS and AP. In selecting the commutator voltage of the traction motors of an ignitron locomotive allowance

Card 1/3

The Technical and Economic Characteristics of Systems of Auxiliary Machines on Main-line a.c. Electric Locomotives

must be made for the influence of the auxiliaries. The method of cooling the ignitrons is very important, because as the motor voltage is reduced the current increases and so do the power losses in the ignitrons, so that increased cooling is required. Calculations of changes in the weight and efficiency of an electric locomotive as a function of the voltage on the commutators of the traction motors is given in Table 2, for a traction motor output of about 800 kW. The method of making annual cost calculations is explained. Systems using capacitor motors and three-phase induction motors supplied from a synchronous phase-splitter give the lowest overall cost. However, the former of these systems has the practical disadvantages of being heavy, and producing high loadings in machines because of asymmetrical working conditions; also it requires special starting equipment. The system with synchronous phase-splitter is more complicated in operation than one with an asynchronous phase-splitter but has a number of positive features. For instance, it offers the possibility of regulating the voltage symmetry on

The Technical and Economic Characteristics of Systems of Auxiliary Machines on Main-line a.c. Electric Locomotives

changing the load, so improving the operating conditions of the auxiliary motors. The practical suitability of this system will be demonstrated by operating test results on experimental locomotives.
There are 2 tables and 5 Soviet references.

ASSOCIATION: Novocherkasskiy elektrovozostroitel'nyy zavod (Novocherkassk Electric Locomotive Works)

SUBMITTED: June 1, 1959

KOZOREZOV, Mikhail Aleksandrovich; KRYLOV, S.S., inzh., red.; KHITROV, P.A., tekhn. red.

[Phase splitters of a.c. locomotives] Rasshchepiteli faz elektrovozov peremennogo toka. Moskva, Transzheldorizdat, 1961. 29 p. (MIRA 15:7)
(Electric locomotives) (Phase converters)

ZOLOTAREV, P.A., inzh.-konstruktor; KOZOREZOV, M.A., inzh.-konstruktor; MELIKHOV, V.L., inzh.-konstruktor; NOVOGRENKO, N.M., inzh.-konstruktor; SVERDLOV, V.Ya., inzh.-konstruktor; Tushkanov, B.A., inzh.-konstruktor; SHAPIRO, I.L., inzh.-konstruktor

The N81 eight-axle a.c. locomotive. Elek.i tepl.tiaga 7 no.2:20-25 F '63. (MIRA 16:2)
(Electric locomotives)